

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A method for producing a silicon carbide single crystal, comprising the steps of:

providing a graphite-made growth crucible (2) with a low-temperature section and a high-temperature section;

placing a seed crystal substrate (5) formed of silicon carbide single crystal in the low-temperature section of the growth crucible;

placing a silicon carbide raw material (11) in the high-temperature section; and

depositing a gas sublimated from the silicon carbide raw material onto the seed crystal substrate to thereby grow a silicon carbide single crystal (6),

wherein an atmosphere gas surrounding the growth crucible contains a silicon gas.

2. (original): The method for producing a silicon carbide single crystal according to claim 1, wherein the silicon carbide single crystal is grown, with vapor pressure of silicon gas in the growth crucible maintained substantially equal to or higher than equilibrium vapor pressure of silicon gas in the gas sublimated from the silicon carbide raw material.

3. (original): The method for producing a silicon carbide single crystal according to claim 1 or claim 2, further comprising the steps of:

using an outer crucible (1) to surround the growth crucible (1), with a space left therebetween;

continuously feeding a silicon raw material (22) from outside into the space; and

evaporating the silicon raw material in the space to thereby form a silicon gas serving as the atmosphere gas surrounding the growth crucible.

4. (original): A method for producing a silicon carbide single crystal, comprising the steps of:

providing a graphite-made growth crucible (2) with a low-temperature section and a high-temperature section;

placing a seed crystal substrate (5) formed of silicon carbide single crystal in the low-temperature section of the growth crucible;

placing a silicon carbide raw material (11) in the high-temperature section;

depositing a gas sublimated from the silicon carbide raw material onto the seed crystal substrate to thereby grow a silicon carbide single crystal (6),

using an outer crucible (1) to surround the growth crucible (1), with a space left therebetween;

continuously feeding a silicon raw material (22) from outside into the space; and

evaporating the silicon raw material in the space to thereby form a silicon gas serving as an atmosphere gas surrounding the growth crucible.

5. (original): The method for producing a silicon carbide single crystal according to claim 4, wherein the silicon raw material is in solid form.

6. (original): The method for producing a silicon carbide single crystal according to claim 5, wherein the silicon raw material in solid form is in a form of powder constituted by particles having a diameter of 0.2 to 5 mm.

7. (original): The method for producing a silicon carbide single crystal according to any one of claims 4 to 6, wherein the silicon raw material is fed at a rate of 0.5 to 20 mg/second.

8. (currently amended): The method for producing a silicon carbide single crystal according to ~~any one of claims 4 to 7~~claim 4, wherein a position within the space to which the silicon raw material is fed has a temperature regulated to at least 1,900°C.

9. (currently amended): The method for producing a silicon carbide single crystal according to ~~any one of claims 4 to 8~~claim 4, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 1.33×10^2 to 4.0×10^4 Pa.

10. (currently amended): The method for producing a silicon carbide single crystal according to claim 9, wherein the atmosphere gas surrounding the growth crucible has a pressure regulated to 6.65×10^3 to 2.0×10^4 Pa.

11. (currently amended): The method for producing a silicon carbide single crystal according to claim 9 ~~or claim 10~~, wherein a growth rate of the silicon carbide single crystal is 1 mm/hour or more.

12. (currently amended): A silicon carbide single crystal produced by the method according to ~~any one of claims 1 to 11~~claim 1, wherein the silicon carbide single crystal exhibits a micropipe density of 10,000 micropipes/cm² or less.

13. (original): An apparatus for producing a silicon carbide single crystal, comprising:
a graphite-made growth crucible (2) having a low-temperature section and a high-temperature section;

a seed crystal substrate (5) formed of silicon carbide single crystal and placed in the low-temperature section;

a silicon carbide raw material (11) placed in the high-temperature section,

whereby a gas sublimated from the silicon carbide raw material is deposited onto the seed crystal substrate to thereby grow a silicon carbide single crystal (6); and further comprising:

an outer crucible (1) disposed to surround the growth crucible, with a space left therebetween; and

means for continuously feeding a silicon raw material (22) from outside into the space.

14. (original): The apparatus for producing a silicon carbide single crystal according to claim 13, wherein the feeding means is a metered feeding apparatus (23) for feeding a solid silicon raw material at a rate of 0.5 to 20 mg/second.

15. (original): The apparatus for producing a silicon carbide single crystal according to claim 13 or claim 14, wherein the growth crucible has a lid (3) and is provided therein with a supporter (4) having a lower surface to which the seed crystal substrate is to be attached, with a space left between an upper surface of the supporter and the lid of the growth crucible.